Maine Department of Health and Human Services
Bureau of Health
Division of Disease Control

Maine Epi-Gram

April 2005 / Issue Contents:

The purpose of the Epi-Gram is to distribute timely and science-based information to guide Maine's healthcare professionals in issues of public health and infectious disease importance and to promote statewide infectious disease surveillance.

DDC Monthly Disease Summary

Correction: The number of shigellosis cases reported last month was incorrect. No cases have been reported in Maine in 2005 through the end of February.

Update: Acute hepatitis C has been removed from the table of diseases of low incidence as the number of cases reported in Maine over the past 5 years is too small for meaningful analysis.

Infectious diseases of public health importance are reportable by law in Maine by health care providers, laboratories, and health care facilities. To monitor trends, the Division of Disease Control publishes a monthly graph of reportable diseases in Maine (please see graph below). The graph displays the Year-To-Date (YTD)

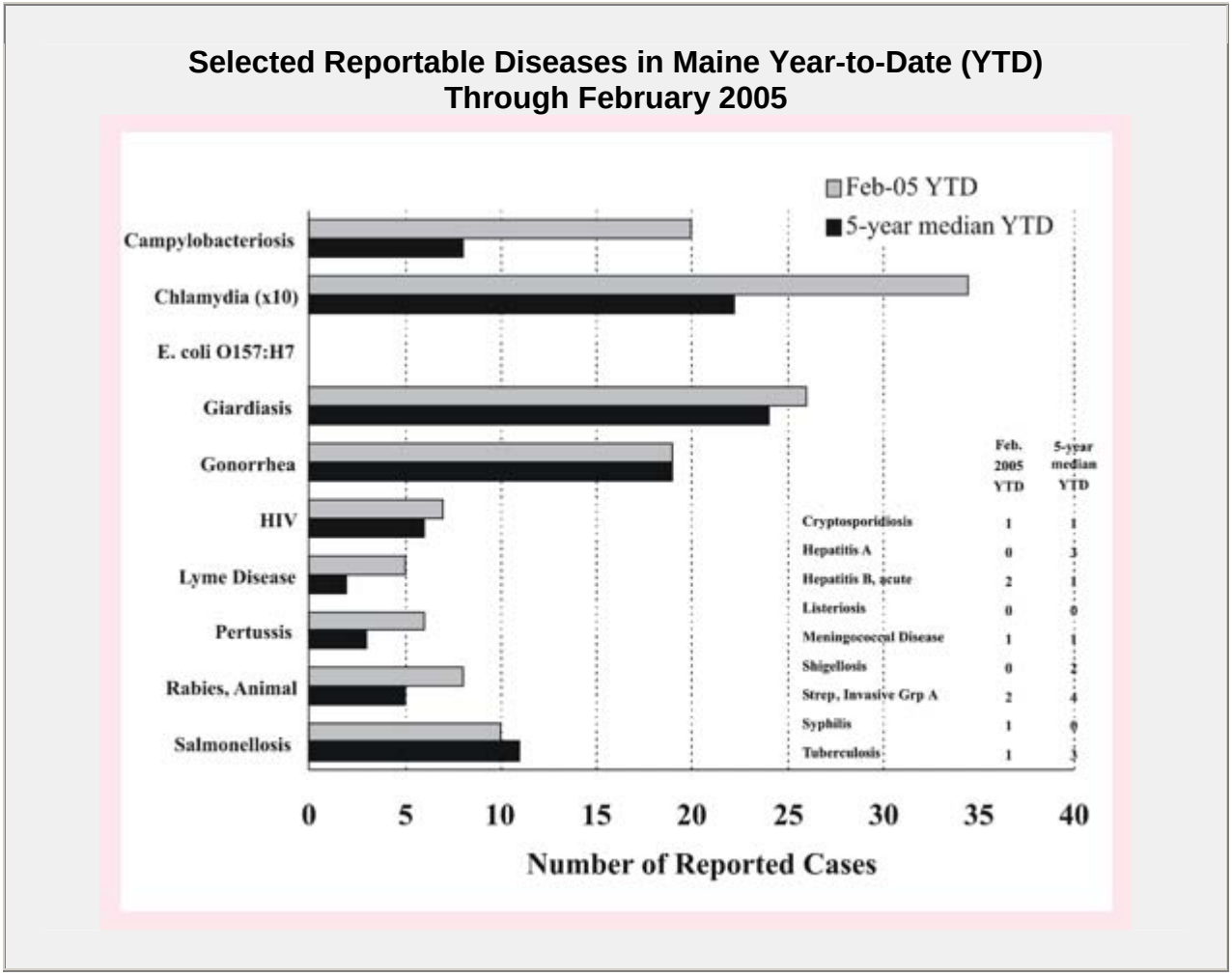
totals for the current year against the median YTD totals for the previous five-year period. By comparing the current year with the previous five years, we can determine if the incidence of a disease differs from the historical baseline.

The year-to-date (YTD) 5-year median is used to establish a baseline for comparison with data from the current year. The YTD 5-year median is obtained by examining the year-to-date totals for each disease for 2000 through 2004. For example, there were 31 cases of giardiasis reported in Maine at the end of February 2000, 27 at the end of February in 2001, 24 in 2002, 18 in 2003, and 21 in 2004. Arranging these numbers in order (18, 21, 24, 27, 31), the median is the middle value -- in this case, 24. By comparing the number of cases of giardiasis by the end of February 2005 (n=26) with the 5-year median (n=24) we can say that the number of cases currently being reported is close to our historical baseline. In other words, there is no evidence from surveillance data that the incidence of giardiasis has changed for the better or worse.

Diseases of high incidence are displayed in the horizontal bar chart; diseases of low incidence are displayed in the table. Chlamydia is the most commonly reported disease in Maine. The numbers for chlamydia in the bar chart should be multiplied by a factor of 10.

Due to space limitations, not all notifiable conditions are displayed on the graph. The complete list of notifiable conditions is available at: http://www.maine.gov/dhhs/boh/ddc/DiseaseReporting.htm Data presented in the graph should be considered preliminary as the numbers may be revised as additional reports are received.

Disease reports can be made by calling 1-800-821-5821. Questions or comments about the graph can be directed to Andrew Pelletier, MD, MPH at 287-4326.



	Feb. 2005 YTD	5-year median YTD
Cryptosporidiosis	1	1
Hepatitis A	0	3
Hepatitis B, acute	2	1
Listeriosis	0	0
Meningococcal Disease	1	1
Shigellosis	0	2
Strep, Invasive Grp A	2	4
Syphilis	1	0
Tuberculosis	1	3

Note: Data are preliminary as of 3/17/05

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New U. S. Department of Health and Human Services Recommendations on Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccuupational Exposure to Human Immunodeficiecy Virus (HIV)

In January 2005, the U. S. Department of Health and Human Services (DHHS) recommended for the first time that people exposed to HIV through nonoccupational exposure, such as unsafe sex, injection-drug use, or rape, be given antiretroviral medications to reduce the likelihood of infection. Although the most effective means of preventing HIV infection is avoiding exposure, providing antiviral medications after unanticipated sexual or injection-drug use exposure was determined to be beneficial.

Based on findings by a panel of external consultants, DHHS made the following recommendations for the United States:

- For persons seeking care <72 hours after nonoccupational exposure to blood, genital secretions, or other potentially infectious body fluids of a person known to be HIV infected, when the exposure represents a substantial risk for transmission, a 28-day course of highly active antiretroviral therapy (HAART) is recommended. Antiretroviral medications should be initiated as soon as possible after exposure.
- For persons seeking care <72 hours after nonoccupational exposure to blood, genital secretions, or other potentially infectious body fluids of a person of unknown HIV status, when such exposure would represent a substantial risk for transmission if the source were HIV infected, no recommendations are made for the use of non-occupational post-exposure prophylaxis (nPEP).
- For persons with exposure histories that represent no substantial risk for HIV transmission or who seek care >72 hours after exposure, the use of nPEP is not recommended.
- Clinicians should evaluate risks and benefits of nPEP on a case-by-case basis.
- Clinicians might consider prescribing nPEP for exposures conferring a serious risk for transmission, even if the person seeks care >72 hours after exposure if, in their judgement, the diminished potential benefit of nPEP outweighs possible adverse events and toxicity of antiretroviral therapy.
- For all exposures, other health risks resulting from the exposure should be considered and prophylaxis administered when indicated. Risk-reduction counseling and appropriate HIV prevention intervention should be provided to reduce the risk of recurrent exposures.

Background

In 1997, the CDC convened an external consultants review on antiretroviral therapy for potential nonoccupational exposure to HIV. This panel evaluated the evidence for use of antiretroviral medications in cases of nonoccupational exposure. Based on the panel's findings, DHHS issued a statement in 1998 that the evidence about nPEP was insufficient to recommend either for or against its use.

Since 1998, additional evidence about the efficacy of nPEP has accumulated. Multiple health departments in the U. S. issued advisories or recommendations that supported the establishment of nPEP treatment programs in their jurisdictions. Clinicians and organizations began providing nPEP to patients they believed might benefit.

In 2001, the CDC convened a second panel on nPEP to review available evidence. The panel's report, **Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States, published in the Morbidity and Mortality Weekly Report, Recommendations and reports, January 21, 2005/54(RR02); 1-20**, available at http://www.cdc.gov/mmwr/pdf/rr/rr5402/pdf, summarizes the evidence about the use and potential efficacy of nPEP and details guidelines for its use. This article summarizes information from the MMWR article.

The overall finding of the panel was that the cumulative data from human, animal and laboratory studies demonstrate that antiretroviral therapy initiated soon after exposure and continued for 28 days might reduce the risk for acquiring HIV. Evidence also indicated that the theoretical risks from nPEP, including possible decrease in risk-reduction behavior, the occurrence of serious side effects from the antiretroviral medications, and potential selection for resistant virus, might not be major problems. In addition, evidence indicated considerable awareness of nPEP among certain segments of the public and interest in its use.

Evaluation of Persons Seeking Care After Nonoccupational Exposure to HIV

The effective delivery of nPEP after exposures that have a substantial risk for HIV infection requires prompt evaluation of patients and consideration of medical and behavioral interventions to address the health risks. Baseline HIV testing with an FDA-approved rapid test kit should be performed on all persons seeking evaluation for nPEP because persons who are already infected with HIV might not be aware they are infected. If rapid tests are not available, an initial treatment decision should be made based on the assumption that the patient is not infected, pending HIV test results.

When the source person of the exposure is known to be HIV infected, he or she should be interviewed to determine his or her history of antiretroviral use and most recent viral load because this information may inform the choice for nPEP medications. When the HIV status of the source is unknown, it should be determined whether the source is available for testing. If permission by the source to test is given, FDA-approved rapid HIV tests are preferable for obtaining results as quickly as possible. If the HIV status of the source is unknown and the exposure is considered to be a substantial transmission risk, nPEP can be started pending determination of HIV status of the source and then stopped if the source is found to be noninfected.

A complete description of the exposure should be obtained. The specific sexual, injection-drug use, or other behaviors involved in the exposure can substantially lower or increase the estimate of transmission risk from a specific exposure.

Evaluation for sexually transmitted infections is important because the presence of these infections might increase the risk for acquiring HIV infection from a sexual exposure. In addition, any sexual exposure also places a person at risk for acquiring other sexually transmitted infections, including hepatitis B. Prophylaxis for sexually transmitted infections, testing for hepatitis B, and vaccination for hepatitis B (for those not immune) should be considered.

Women of reproductive capacity who have had genital exposure to semen also are at risk for pregnancy. In these cases, emergency contraception should be discussed.

Prescription of Antiretroviral nPEP

The sooner nPEP is administered after exposure, the more likely it is to interrupt transmission. One of the HAART combinations recommended for the treatment of persons with established HIV infection should be selected based on adherence, toxicity and cost considerations. Regardless of the treatment chosen, the patient should be counseled about the potential side effects and adverse events that require immediate medical attention. In some cases, the use of medications, such as antiemetics or antimotility agents, to treat symptoms might improve adherence.

Available data indicate that nPEP is less likely to be effective if initiated >72 hours after HIV exposure. The initiation of nPEP should only be in cases of infrequent exposures because nPEP is not 100% effective in preventing HIV infection and because antiretroviral medications carry risks for adverse effects and serious toxicities. In cases of recurrent exposures, exposed persons should be provided with intensive risk-reduction interventions instead of nPEP.

Scientific Consultation

When clinicians are not experienced with using HAART or when information from source-persons indicates the possibility of antiretroviral resistance, consultation with infectious disease or other HIV-care specialists, if it is

available immediately, might be warranted before prescribing nPEP. When considering prescribing nPEP to children or pregnant women, consultation with pediatricians or obstetricians might be advisable. If such consultation is not immediately available, initiation of nPEP should not be delayed. An initial nPEP regime should be started, and, if necessary, revised after consultation is obtained.

Patients prescribed nPEP might benefit from referral for psychological counseling that helps ease the anxiety about exposure, strengthens risk-reduction behaviors, and promotes adherence to the nPEP regimes.

Follow-up Testing and Care

All patients seeking care after HIV exposure should be tested at baseline and at 4-6 weeks, 3 months, and 6 months after exposure.

Clinicians who prescribe nPEP should monitor liver functions, renal functions, and hematologic parameters as indicated by the prescribing information found in the antiretroviral treatment guidelines, package inserts, and the Physician's Desk Reference. Unusual or severe toxicities from antiretroviral medications should be reported to the manufacturer or the FDA.

At follow-up visits, clinicians should assess their patients' needs for behavioral intervention, education, and services in a frank and nonjudgmental manner. Clinicians should help their patients identify ongoing risk issues and develop plans for improving their use of protective behaviors.

If a new diagnosis of HIV infection is made or evidence of other sexually transmitted infection is identified, the patient should be assisted in notifying their sexual and injection-drug use contacts. Assistance with confidential partner notification, without revealing the patient's identity, is available through the Bureau of Health.

Reporting and Confidentiality

Clinicians should handle nPEP evaluations with the highest level of confidentiality because of the emotional, social and potential financial consequences of possible HIV infection. Clinicians should report newly diagnosed HIV infections and sexually transmitted infections (syphilis, gonorrhea and chlamydia) to the Maine Department of Health and Human Services, Bureau of Health according to Rules for the Control of Notifiable Conditions, Chapter 258. For information pertaining to the rules, go to
http://www.maine.gov/dhhs/boh/ddc/DiseaseReporting.htm

HIV test results should be recorded separately from the findings of sexual assault examination to protect patients' confidentiality if medical records are later released for legal proceedings.

Summary

The first line of defense against HIV infection is the promotion of behaviors that avoid exposure. However, recent evidence indicates that prophylaxis following exposure is a viable option to prevent HIV infection.

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Outbreak of Gastroenteritis Associated with Breakfast Sandwiches at a Large Worksite

Background

Each year, by CDC estimates, there are 76 million cases of foodborne illness in the United States. The vast majority of these cases are mild and self-limiting. However, an estimated 325,000 cases result in hospitalization and 5,000 result in death. The USDA estimates that in 2000 the cost of foodborne illnesses from just five pathogens was 6.9 billion dollars. Early reporting of possible foodborne outbreaks by clinicians can be critical in

documenting their occurrence, preventing further illnesses, and identifying practices that contributed to the outbreak so that they can be avoided in the future.

Clinical Events

In late autumn of 2004, emergency department clinicians at a small coastal hospital noted that four patients who had presented within 24 hours all reported that they were employed by the same large manufacturer. The patients were all males, ranging from 37 to 62 years of age. Two patients required transport by ambulance due to the severity of symptoms, and three required hospitalization. All four patients had vomiting, diarrhea and sub-normal temperatures. Three patients also had abdominal pain/cramps, and two had hematemesis, bloody stool, and shaking chills. The apparent outbreak was reported from the hospital to the Bureau of Health Disease Reporting Line (1-800-821-5821).

Epidemiologic Investigation

On initial investigation, epidemiologists learned that an additional male employee had left work with similar symptoms during the same time period. The patients worked at different locations and performed different tasks within the facility. Each individual reported having purchased breakfast sandwiches from an on-site concession on the day that he became ill. One person became ill on day one, three became ill on day two, and one became ill on day three. All five men reported the onset of symptoms to be one to six hours after consuming the breakfast sandwiches. They had eaten no other foods in common. Stool and emesis samples were not sent for laboratory analysis.

Environmental Investigation

Epidemiologists worked with sanitarians at the Eating and Lodging Program in the DHHS Bureau of Health and staff at the Maine Department of Agriculture Division of Quality Assurance and Regulation to investigate the food preparation and distribution process. The vendor (vendor A), who had sold meals at this site for 18 months, had only recently begun serving breakfast. Due to the increased sales volume, the production of these breakfast sandwiches had been subcontracted to a second vendor (vendor B).

Preparation of the sandwiches by vendor B began at approximately midnight each day when eggs, sausage and bacon were prepared and baked. The eggs were pooled in batches of eighteen, mixed with “half&half” and baked in large trays. The sandwich components were then cooled, the eggs cut into squares and everything was returned to the refrigerated. The time out of refrigeration was two and one-half hours. At 1 pm on the following afternoon, the sandwiches were assembled, individually wrapped, labeled and placed into picnic coolers. In the bottom of each cooler was a bag of ice and 46 to 48 sandwiches were stacked on top of the ice. The sandwiches where then transported to vendor A. At the time the sandwiches were arrived at vendor A’s location, they had been in coolers or un-refrigerated for a total of four to five hours. When vendor A received the sandwiches they were placed on a work surface for counting and later refrigeration. At 4 am on the following day, the then cold sandwiches were placed into (150 to 200 degree) warming ovens on the vendor trucks. These sandwiches were served beginning at 6 am at the worksite. The time between initial preparation of the sandwich components by vendor B and first serving of the sandwiches by vendor A was approximately 31 to 35 hours. As noted above, there were several intervals during that time period, when the product may have been subject to time-temperature abuse.

Discussion

Unfortunately, a definitive determination could not be made as to the etiologic agent or source of the illnesses. The lack of stool test results was a problem in this regard. Nonetheless, the epidemiologic information strongly implicated the breakfast sandwiches as the common source of illness. Although no specific violations were cited by the Department of Agriculture or the Eating & Lodging inspectors, food service by vendor A was temporarily suspended by the manufacturing plant pending further investigation.

Vendor A made the decision to prepare the sandwiches for future sale at their own facility. The process for preparation is that sandwiches are now assembled as soon as the components are cooked, immediately

wrapped and refrigerated. These sandwiches are then served the next morning. This vastly reduces both the amount of time that sandwiches are out of refrigeration and the amount of time elapsed from preparation to sale.

As a result of the quick reporting by the hospital staff and the personnel at the manufacturing plant, this situation was investigated and referred to the licensing entities for inspection. Potential hazards in the food preparation and transport were identified, steps were taken to reduce those hazards and further illness was avoided. The investigation of this outbreak also illustrates the importance of obtaining stool specimens for microbiologic examination when feasible, as more specific conclusions might then be drawn.

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Reptile/Amphibian-Associated Salmonellosis

A four-year old girl who sucks her thumb develops bloody diarrhea and cramping. She has a pet turtle that is maintained in a tank; the tank is situated such that the child is able to reach into it.

An eight-year old boy develops vomiting, bloody diarrhea, cramping, and fever. He is responsible for cleaning his pet lizards' cage, and he "constantly" plays with them.

An adult female develops nausea, vomiting, bloody diarrhea, cramping, headache, and fever. She had recently handled lizards and tortoises in a home-based serpentarium. She was immunocompromised due to previous medical conditions, and was unaware of any special concerns related to reptile exposure.

All of the above Maine patients were culture positive for *Salmonella* infection. Although subsequent serotyping and their exposure histories could not definitively identify how they became infected with *Salmonella*, their cases illustrate why this paper's topic is important.

The genus *Salmonella,* in the family *Enterobacteriaceae*, has a worldwide distribution, and consists of bacteria that are gram-negative, usually motile, and facultatively anaerobic. The taxonomy of *Salmonella* is in a state of controversy, but currently there are approximately 2,400 serotypes[1], with some serotypes expressing several different phenotypes, which can be important in an epidemiological investigation.

Most human cases of salmonellosis are caused by just four serotypes: *Salmonella* enterica ser Enteritidis, ser Typhimurium, ser Newport, and ser Heidelberg[1]. *S. typhi* and the paratyphoid serotypes are species specific for humans, and are rarely found in reptiles[1]; all other serotypes can be considered to have zoonotic potential.

Although the focus of this article is on reptiles and amphibians, other animal reservoirs include, but are not limited to poultry, rodents, swine, cattle, sheep, goats, and horses.

A wide variety of *Salmonella* serotypes have been isolated from reptiles; 40% of all serotypes are cultured primarily from reptiles and are rarely found in humans or other animals[1-2]. Serotypes Java, Stanley, Marina, Poona, Pomona, and subspecies Arizonae are commonly cultured from reptiles, and multiple serotypes can be cultured from the same animal[1]. Reptiles can become infected via transovarial transmission, direct contact with other infected reptiles, or contaminated reptile feces. A large proportion of reptiles (as high as 90%) are asymptomatic carriers of *Salmonella*. Thus, if a family has a pet reptile, there is a good chance it is a *Salmonella* carrier, but that it will show no outward signs of its carrier status. A carrier reptile will shed the organism intermittently in its feces, making it even more difficult to detect. It is not possible to eliminate *Salmonella* carriage in reptiles with antibiotic therapy; attempts to do so only contribute to increased antibiotic resistance and a false sense of security.

Salmonellosis, characterized by headache, fever, diarrhea, nausea, abdominal pain, and occasional vomiting, is usually relatively mild, but severe and sometimes fatal disease can result, especially in children and people who are immunocompromised. Reptile-associated salmonellosis has been documented since the 1940s and 1950s[3]. Before the Food and Drug Administration in 1975 prohibited the distribution and sale of turtles with a carapace (the top part of the shell) smaller than four inches (a size easily placed in the mouth of a child), small pet turtles were an important source of *Salmonella* infection in the United States. Four percent of families owned turtles, and 14 percent of salmonellosis cases were contracted by exposure to turtles. The turtle ban is thought to have resulted in the prevention of an estimated 100,000 cases of salmonellosis in children aged one to nine years every year[3]. However, since 1986, the popularity of other reptiles, especially iguanas, has been paralleled by an increased incidence of *Salmonella* infections caused by reptile-associated serotypes[4].

Amphibians are also a source for salmonellosis; frogs and toads are frequent carriers of *Salmonella* and have been linked by epidemiologic evidence to *Salmonella*. In a population-based, case-control study, housing an amphibian was associated independently with *Salmonella* infection[4].

From 1991 to 2001, the estimated number of households with reptiles doubled from approximately 850,000 to 1.7 million[4]. Although most *Salmonella* infections are caused by eating contaminated meat, poultry, or eggs[2], reptile and amphibian contacts are estimated to account for 74,000 (6%) of the approximately 1.2 million sporadic *Salmonella* infections that occur each year in the United States[4].

Humans acquire reptile- or amphibian-associated salmonellosis either directly through handling the animal, or indirectly by contact with an object contaminated by a reptile or amphibian or their feces[5]. When a pet snake or lizard has been allowed to roam in the home, rugs and furniture can all become potential sources of infection[2]. *Salmonella* bacteria are extremely hardy, able to resist dehydration and saline conditions in feces, soil, water, and food for several months; *Salmonella* has been cultured from dried reptile feces six months after the reptile had been removed, and from aquarium water six weeks after the turtle had been removed[2].

Young children, especially infants, are at increased risk both for *Salmonella* infection, and for severe disease and death from salmonellosis, probably due to diet, host susceptibility, infectious dose, hygiene, and their hand to mouth activity[5]. This makes reducing the direct and indirect contact of infants and children less than five years old to reptiles the foundation of a reptile- and amphibian-associated salmonellosis prevention program; even minimal indirect contact with reptiles can result in illness. The following is a list of recommendations to reduce/prevent reptile- and amphibian-associated salmonellosis:

- Children less than five years of age or other persons who are at increased risk of infection or serious complications of salmonellosis (i.e., pregnant women, and immunocompromised persons) should avoid not only contact with reptiles or amphibians, but also with any items that have been in contact with reptiles and amphibians.

We urge all parents that are either expecting a child or already have children less than five years of age to remove any pet reptiles or amphibians from their home.

- Reptiles and amphibians should not be kept in child-care centers.
- If children are going to handle reptiles or amphibians, they should be supervised to ensure that they do not place their hands or objects that a reptile or amphibian has contacted in their mouths, and that they wash their hands with soap and water immediately after handling these animals or objects.
- Veterinarians, human health-care providers, and pet-store owners should provide information to potential purchasers and owners of reptiles and amphibians about the risks of reptile- and amphibian-associated salmonellosis and how to reduce or prevent it. In one study, fewer than half the families with salmonellosis and known iguana exposure suspected their iguanas might have been the cause of illness[4].

- Veterinarians, human health-care providers, and pet-store owners should advise reptile and amphibian owners to always wash their hands with hot, soapy water after handling their animals, and/or their animals' cages, equipment, and stool, and to have anyone who handles their animals do the same. Hand washing should also be done after coming into contact with any area where reptiles are allowed to roam free.
- Reptiles and amphibians should be kept out of food-preparation areas (kitchen, dining room, or any other area in which food is prepared), and bathroom sinks and tubs or any area where infants are bathed. These areas should NOT be used to bathe reptiles or amphibians or to wash their dishes, cages, or aquariums.
- Reptile owners may wish to purchase a plastic basin or tub in which to bathe or swim their reptiles. Wastewater and fecal material should be disposed of in the toilet instead of the bathtub or household sink.
- Reptiles and amphibians should be kept caged; at a minimum, the parts of the house where reptiles are allowed to roam free should be limited.
- Do not eat, drink, or smoke while handling reptiles, reptile cages, or other reptile equipment. Do not kiss reptiles or share food or drink with them.
- Follow instructions from your veterinarian concerning proper diet and environment for your reptile or amphibian. Healthy animals living in proper environments are less likely to shed *Salmonella* bacteria.
- Reptiles and amphibians in zoos, exhibits, and other public settings should be kept from both direct and indirect contact with people. The only exception is in designated animal contact areas with appropriate handwashing facilities; food and drink should not be allowed in any animal contact area.

Although still illegal, sales of baby turtles have suddenly increased in several states, along with established cases of turtle-associated salmonellosis[6]. There are some legitimate southern U.S. turtle producers using production methods that result in *Salmonella*-free turtles for the global market; these turtles do receive health certificates attesting to their *Salmonella* status, but still cannot be legally sold in the U.S. because of their likelihood of becoming infected with *Salmonella* in the future[6]. Those who no longer want their turtles should not release them in to the wild; they should contact the seller, or their local humane society. Reptile rescue groups like Turtle Homes USA, which can be reached at (516) 623-3079, are another option.

With a few exceptions (for example, infants or immunocompromised individuals), most people have a low risk of acquiring salmonellosis from these animals, but the risk can be reduced even further by following simple precautions and being a responsible pet owner.

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Protecting Maine's High Risk Population While Managing Limited Availability of Influenza Vaccine

The Maine Immunization Program (MIP) has distributed influenza and pneumoccoccal vaccine to health care providers across the state since 2000. Realizing that the level of vaccine wastage exceeded the CDC's limits for the first two years, MIP staff developed a vaccine allocation model to encourage greater accountability of vaccine usage while maintaining the Bureau's dedication to reaching those at highest risk. Through this allocation model, the maximum amount of vaccine a provider can order is established by calculation of the previous year's total vaccine administered, plus 5%. Providers have the ability to submit a written request, with supporting documentation, for a higher amount of vaccine. This model was first applied in 2002 and was highly successful in reaching those in need, despite the vaccine supply shortage, as well as reducing wastage. Outcomes associated with the allocation policy are a high level of provider acceptance and satisfaction, a substantial decrease in vaccine wastage and maintenance of vaccine delivery to those at the high risk.

In 2003, the Maine State Legislature approved the allocation of monies from the Healthy Maine Fund to be used by the Department of Health and Human Services (DHHS) to purchase influenza and pneumococcal vaccine for high risk adults in the absence of federal assistance. This law allowed for $450,000 for the 2003-2004 influenza season and $1,100,000 for the 2004-2005 season. The Bureau of Health was charged by the DHHS to carry out the directive, and MIP to purchase and distribute the vaccine to healthcare providers throughout the state using the allocation model implemented in 2002.

Using the money allocated for 2003-2004, MIP was able to purchase 65,550 doses of adult influenza vaccine and 4,320 doses of pneumococcal vaccine. The amount of influenza vaccine was less than half of what was estimated by the MIP for total need. In order to reach the populations that were at highest risk, distribution of the vaccine was prioritized to nursing homes, other long term care facilities and health centers. The allocation model was used to develop a distribution plan for the vaccine to these facilities.

Because the amount of funding for the 2004-2005 influenza season was more than twice the amount for the previous year, MIP predicted the ability to cover 100% of anticipated provider orders, including but not limited to private providers, using the expanded risk criteria. The amount of vaccine needed to cover the adult high-risk population was determined using the allocation process from the 2003-2004 season. By July 2004, a total number of doses needed was determined and the number of doses allocated to each provider documented. Using Healthy Maine funds, MIP placed an order for 113,000 doses of adult influenza vaccine in July, 2004.

In October, 2004, a major distributor announced its inability to distribute its supply of influenza vaccine due to contamination. Nationally, this distributor supplied 50% of the total projected doses to be distributed in the United States, including 100% of the projected adult influenza doses ordered by the State of Maine. Upon notification, the Centers for Disease Control immediately began work with Aventis Pasteur to address this national shortage, in order to meet the needs of the highest risk populations. CDC worked with state health departments, manufacturers, and the health community to establish a national reapportionment plan. CDC also redefined high-risk populations, prioritizing groups such as those with chronic illness and people age 65 and older.

To prepare for the anticipated reduction of vaccine available in Maine, Dora Mills, MD, Director of the Maine Bureau of Health, worked with key staff to develop a vaccine distribution strategy that would reach Maine's high risk populations. This was accomplished using MIP's allocation model combined with census population data by county, and other important measures. By December, 165,000 doses of influenza vaccine had been distributed to medical providers throughout the State.

Over the past several years, the influenza vaccine allocation model has proved useful and effective. It has played a critical role in successfully providing influenza vaccine to Maine citizens at highest risk. MIP is

expanding usage of this model for distribution of other vaccines and is integrating it into a computerized system currently under construction. The future implementation of this system will make vaccine distribution faster and reduce wastage.

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Lymphogranuloma Venereum (LGV) Resurgence among Gay and Bisexual Men

A recent Morbidity and Mortality Weekly Report (MMWR-October 29, 2004/53 (42): 985-988) of the Centers for Disease Control and Prevention (CDC) alerted clinicians to an increase in the number of cases of LGV among men who have sex with men (MSM) in the Netherlands. Typically, fewer than five cases a year are reported in that country. As of September 2004, a total of 62 cases had occurred. Except for one, all patients had gastrointestinal symptoms (e.g. bloody proctitis with purulent or mucous anal discharge, tenesmus and constipation).

LGV is caused by *Chlamydia trachomatis* (CT) serotypes L1, L2 and L3. LGV is a rare disease in the United States. As of this writing, no cases of LGV have been identified in Maine. However, the federal Centers for Disease Control (CDC), which is coordinating a national investigation, has confirmed six recent cases in the United States, two in New York City, three in San Francisco and one case in Atlanta. CDC is also investigating other potential cases. The illness appears to have primarily affected gay and bisexual men.

Among cases identified thus far, most have also had HIV/AIDS infection. Most people infected report having multiple sex partners and engaging in unprotected anal intercourse and other high-risk practices.

Clinicians should be aware of this clinical presentation of LGV. CDC advises clinicians who care for MSM to consider LGV in the diagnosis of compatible syndromes (e.g. proctitis and proctocolitis) and perform tests to diagnose *C. trachomatis* infections without regard to the specific LGV serovars.

Diagnosis of LGV

The diagnosis is based on clinical findings, supported by serologic tests for CT (complement fixation test with a titer of $\geq$ 1:64 or a microimmuno-fluorescence test with a titer of >1:128) or direct identification of CT by culture or nonculture nucleic acid testing. Serologic testing, which has not been well standardized, is not considered specific for LGV, but can be used to support the clinical diagnosis. Direct identification by commercially available methods is also not specific for LGV serovars of CT. Use of rectal swabs for nucleic acid testing has not been cleared by the U.S. Food and Drug Administration. The CDC is collaborating with health departments to assist in the laboratory diagnosis of LGV with specialized amplified nucleic acid testing.

Treatment of LGV

The recommended treatment for LGV is doxycycline 100 mg orally, twice a day, for 21 days. Alternative treatment is 500 mg of erythromycin base orally, four times a day, for 21 days. Some experts believe that azithromycin 1 gram orally, once weekly, for 3 weeks, is effective (however, clinical data are lacking).

Sex partners who had contact with the patient within 30 days of the patients' onset of symptoms should be evaluated. In the absence of symptoms, they should be treated with either 1 gram of azithromycin in a single oral dose or 100 mg of doxycycline orally, twice a day, for 7 days.

Recommended Approach

- Clinicians who care for MSM should consider LGV in the diagnosis of compatible syndromes, particularly proctitis. Other manifestations of LGV include tender lymph nodes (inguinal and/or femoral which can become fluctuant) and anogenital ulcers (small, generally painless ulcer followed by the appearance of tender lymph nodes).
- Although not currently a notifiable condition, please contact the Maine Bureau of Health STD Program if you suspect a case of LGV. We can assist in direct identification and serologic testing for CT in cases compatible with LGV as well as with partner management services.
- Perform direct identification testing for CT per CDC recommendations.
- Perform testing for *Neisseria gonorrhoeae* and other STDs (syphilis; HIV and HSV as appropriate).
- Perform serologic testing for CT to support clinical diagnosis.
- Cases compatible with LGV should be treated presumptively or until all tests used to support the diagnosis are negative for CT/LGV.
- Instruct MSM patients to limit the number of sex partners and use condoms every time for anal intercourse, to reduce of spread of LGV as well as other STDs and HIV.

For more information on specimen collection/testing and other assistance, contact Maine Bureau of Health HIV, STD and Viral Hepatitis Program at 207-287-2046 or visit www.cdc.gov/std/lgv.

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Disease Reporting: Who, When, How, and Where

The responsibility of governments to control and prevent disease in the population dates back to early times. Government responsibility was exercised during the epidemics of plague, syphilis, and smallpox in the Middle Ages to identify possible sources of disease, to quarantine infectious cases, and to prevent further spread. Illness was monitored, regulations were enacted to prevent pollution of streets and public water supplies, and instructions were made for burial and food handling.

Infectious disease surveillance in the United States began soon after the colonies were established. In 1741 Rhode island passed legislation requiring tavern keepers to report contagious disease among their patrons. Two years later, a law was passed requiring the reporting of smallpox, yellow fever, and cholera.

National disease surveillance began in 1850, when mortality statistics were first published by the federal government based on the decennial census. The legal requirement to collect national morbidity data in the United States was initiated in 1878, when Congress authorized the US Public Health Services to collect reports of the occurrence of quarantineable diseases including cholera, plague, smallpox, and yellow fever.

Today, a total of 61 infectious diseases are nationally reportable; 68 are reportable in Maine. The list of reportable infectious diseases changes periodically. Diseases may be added to the list as new pathogens emerge or when a previously recognized pathogen becomes more important. Also, some diseases may be deleted from the list as their incidence or importance declines. Infectious diseases present a common threat causing illness, suffering and death. While modern advances serve to provide greater control and prevention of some diseases, others continue to thrive and still others are constantly emerging.

The Bureau of Health works with healthcare providers and laboratorians to gather infectious disease information, analyze it, and provide reports in a timely way.

Surveillance data are useful for:

- identifying situations that need immediate public health action, such as disease outbreaks;
- identifying emerging diseases, including the populations at high risk;
- monitoring trends in the burden of disease;
- guiding the planning, implementation and evaluation of disease prevention and treatment programs;

- informing public policy, including the allocation of heath care resources.

The public health "patient" is the community, and information about that community can be useful to the clinician providing care to the individual. Partnership between public health professionals and health care providers leads to accurate, representative and timely information for all.

Basic Information about Disease Reporting in Maine

Who

Health Care Providers, medical laboratories, health care facilities, administrators, health officers and veterinarians are required to report notifiable diseases to the State Health Department. (Tavern keepers are no longer mandated reporters.)

When

Diseases that are possible indicators of bioterrorism and thirteen other highly contagious diseases are to be reported immediately on the day of recognition or strong suspicion of disease. The remainder of notifiable conditions are to be reported within 48 hours of recognition or strong suspicion of disease.

How

Disease reports may be made by telephone or fax to the Bureau of Health 24 hours a day, 7 days a week. The telephone and fax numbers are toll free, telephone 1-800-821-5821 and fax 1-800-293-7534. An epidemiologist is on call 24 hours a day, 7 days a week.

Disease reports may also be mailed to:

DHHS/BOH

Division of Disease Control
286 Water Street
8Th Floor, Key Plaza
11 State House Station
Augusta, Maine 04333-0011

Where

Up to date information regarding Infectious Disease incidence in Maine is now available in two primary locations:

- Bureau of Health Website http://www.maine.gov/dhs/boh/ddc/DiseaseReporting.htm
- www.mainepublichealth.gov

The best public health surveillance system results from an active partnership between health care providers, laboratorians and public health professionals. The Division of Disease Control wishes to acknowledge all those who work so diligently to make the disease reporting system effective.

Contributed by: Diane Ober
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Please call the Bureau of Health to report all reportable diseases:

Telephone Disease Reporting Line (24 hours / 7 days): 1-800-821-5821

Consultation and Inquiries (24 hours / 7 days):
1-800-821-5821

Facsimile Disease Reporting Line (24 hours / 7 days): 1-800-293-7534

Division of Disease Control Website:
www.maine.gov/dhs/boh/ddc/indexnew.htm

The Department of Health and Human Services
Bureau of Health
Division of Disease Control
11 State House Station
Augusta, Maine 04330-0011
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